REMARKS

Applicants respectfully request reconsideration of the application, as amended, in view of the following remarks.

The present invention as set forth in **amended Claim 1** relates to a thermoplastic resin composition, comprising:

a polyamide resin component comprising

(A) 5 to 95% by weight of a polyamide resin obtained by polycondensing diamine(s) including at least tetramethylenediamine with dicarboxylic acid(s) including at least adipic acid, based on a total amount of (A) and (B); and

(B) 95 to 5% by weight of a polyamide resin obtained by polycondensing diamine(s) including at least one of 1,9-nonanediamine and 2-methyl-1,8-octanediamine with dicarboxylic acid(s) including at least terephthalic acid, based on a total amount of (A) and (B).

Yamagishi et al fail to disclose or suggest a semi-aromatic polyamide including at least one of 1,9-nonanediamine and 2-methyl-1,8-octane diamine as claimed in part (B) of Claim 1. This has been acknowledged by the Examiner at page 3, first full paragraph of the Office Action.

Yamagishi et al disclose a heat resistant polyamide film obtained by melt extrusion of a polyamide composition of a mixture of

a polyamide (A) composed of diaminobutane and adipic acid, and

a semi-aromatic polyamide (B) composed of a polyamide containing an aromatic dicarboxylic acid and an aliphatic diamine (Yamagishi et al, abstract). The aromatic dicarboxylic acid is isophthalic and/or terephthalic acid (Yamagishi et al, col. 3, lines 42-47). As the aliphatic diamine a linear aliphatic diamine having from 2 to 12 carbon atoms is employed (Yamagishi et al, col. 3, lines 33-40).

There is no disclosure or suggestion for using the claimed combination of at least one **of 1,9-nonanediamine and 2-methyl-1,8-octanediamine with dicarboxylic acid(s) including at least terephthalic acid.**

Contrary to Yamagishi et al, the present invention is neither aimed at heat resistant polyamide films, nor at solving the problem of biaxially stretching. In fact polyamide-4,6 is in itself already a heat resistant polyamide.

The present invention aims at solving the problem of blistering of polyamide-4,6 compositions in surface mounting processes used in the electric and electronic industry for assembling electronic parts while maintaining the good molding properties of polyamide-4,6.

Surprisingly, this has been achieved by the composition according to the present invention comprising, next to polyamid-4,6 (A) a polyamide resin (B) as claimed in Claim 1. This is not disclosed or suggested by Yamagishi et al. The superior properties of the claimed composition are further illustrated by the results in Table 3, second part, at page 34 of the specification, copy of which is provided below.

Table 3 (Second Part)

		Evaluation Result					
		Mechanical Strength			Blister Resistance [pieces]	Moldability	Friction Property $mm^3/N \bullet km$
		Modulus in Flexure [MPa]	Weld Strength [%]	Tensile Elongation [%]			
Example	1	13,200	85	2.8	0	A	$15x10^{-3}$
	2	13,300	80	2.8	0	A	$15x10^{-3}$
	3	13,100	85	2.8	0	A	$15x10^{-3}$
	4	12,800	85	2.9	0	A	$16x10^{-3}$
	5	13,200	85	2.8	0	A	$15x10^{-3}$
	6	13,200	85	2.8	0	A	$15x10^{-3}$
	7	3,300	92	30	0	A	$5x10^{-3}$
Comparative Example	1	12,000	85	2.8	10	A	$15x10^{-3}$
	2	12,700	45	1.2	0	B	$37x10^{-3}$
	3	3,100	92	30	5	A	$5x10^{-3}$
	4	3,200	60	14	0	B	$10x10^{-3}$

Examples 1-7 are according to the present invention. Comparative Examples 1 and 3 are representative for data pertaining to nylon 4,6 (A), and Comparative Examples 2 and 4 pertain to the semi aromatic polyamide (B). The small amount of 1% of the other polyamide in the compositions according to the Comparative Examples cannot be expected to influence the properties of the 99% of the basic material as is seen from the attached illustration of the data represented in the above Table. In the attached illustration, the upper part relates to Comparative Examples 3 and 4 and Example 7, the lower part relates to Comparative Examples 1 and 2, and Examples 1-6.

First of all, superior results are obtained for the compositions according to the present invention for both blistering and molding behavior. The levels of these properties are higher than could be expected based on the weighted averages for the properties of the individual polyamides or compositions thereof as according to Comparative Examples. (See Table 3, second part as reproduced above and the attached illustration of the data).

In addition, it has been surprising that the flexural modulus of the composition according to the invention is higher than the value calculated from the blending ratio of the polyamide (A) to the polyamide (B), whereas the friction coefficient becomes lower than the value calculated from the blending ratio of the polyamide (A) to the polyamide (B).

Compare in this respect Example 1-6 with Comparative Examples 1 and 4 (filled compositions), and Example 7 with Comparative Examples 3 and 4 (unfilled compositions).

Moreover, weld strength and tensile elongation remain at the good level of polyamide-4,6 without any significant reduction due to the presence of polyamide (B).

All four Comparative Examples fall outside the claimed range, and, in contrast to the Examples 1-7, which have a good property level for all three aspects considered (blister resistance, moldability and friction resistance), whereas all four Comparative Examples have at least one such property which is insufficient. These results already show clearly the surprising effect that the claimed compositions have good properties in all three aspects, and not a mere average of the properties of the more extreme compositions. (See Table 3, second part as reproduced above and the attached illustration of the data).

The above results are not disclosed or suggested by Yamagishi et al.

Furthermore, there is no reasonable expectation of success to achieve improved blistering behavior in combination with retention of good molding properties in view of Yamagishi et al. A person of ordinary skill in the art who wants to improve blister resistance and maintain moldability of a thermoplastic composition would not consult Yamagishi et al, because this reference does not relate to molded parts for use in the electronic industry nor to the problem of blistering in a surface mounting process. Even if the person of ordinary skill in the art would have done so, Yamagishi et al does not provide any incentive to come up with the composition according to Claim 1 with the expectation of success, in particular in view of the poor moldability of the polyamide resins.

Therefore, Claim 1 of the present invention is not obvious over Yamagishi et al.

Therefore, the rejection of Claims 1-3 under 35 U.S.C. §103(a) as being unpatentable over Yamagishi et al (U.S. 5,143,983) is believed to be unsustainable as the present invention is neither anticipated nor obvious and withdrawal of this rejection is respectfully requested.

The objection to Claims 4-6 under 37 C.F.R. §1.75(c) is obviated by the amendment of these claims.

The rejection of Claims 1-3 under 35 U.S.C. §112, 2nd paragraph, is obviated by the amendment of these claims.

Applicants respectfully request that the Examiner acknowledge that the references cited in the Information Disclosure Statement, filed in the above-identified application on March 26, 2003, have been considered. For the Examiner's convenience a copy of Form PTO 1449 as filed on March 26, 2003, is attached herewith.

Applicants submit that the present application is now in condition for allowance and early notice of such action is earnestly solicited.

Respectfully submitted,

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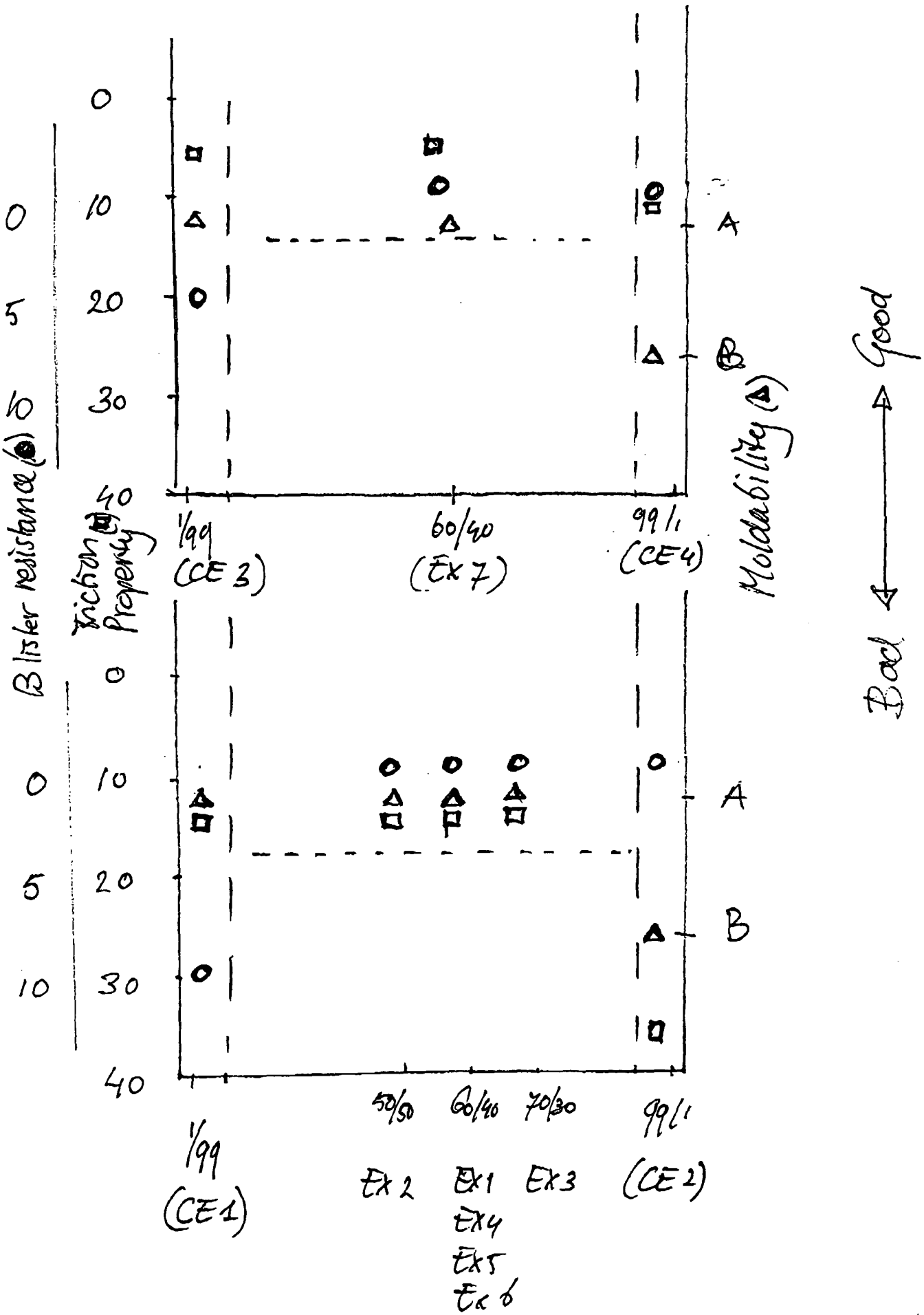
Blister resistance (●)
Tackiness (□)
Property
Moldability (▲)
Good
Bad
0
10
20
30
40
A
B
1/99
(CE3)
60/40
(Ex7)
99/1
(CE4)
1/99
(CE1)
50/50
60/40
70/30
99/1
Ex2
Ex1
Ex3
(CE2)
Ex4
Ex5
Ex6

Form PTO 1449 (Modified)	U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE	ATTY DOCKET NO.	SERIAL NO.
		210241US0	09/886,256
LIST OF REFERENCES CITED BY APPLICANT		APPLICANT	
		Masaaki MAWATARI, et al.	
		FILING DATE	GROUP
		June 22, 2001	1714

U.S. PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS	FILING DATE IF APPROPRIATE
	AA	4,716,214	12/29/87	R. J. GAYMANS, et al.			
	AB						
	AC						
	AD						
	AE						
	AF						
	AG						
	AH						
	AI						
	AJ						
	AK						
	AL						
	AM						
	AN						

FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	TRANSLATION YES	TRANSLATION NO
	AO	0 976 774	02/02/2000	EUROPE		
	AP					
	AQ					
	AR					
	AS					
	AT					
	AU					
	AV					

OTHER REFERENCES (Including Author, Title, Date, Pertinent Pages, etc.)

	AW	Patent Abstracts of Japan, JP 09-012875, January 14, 1997
	AX	
	AY	
	AZ	☐ Additional References sheet(s) attached

Examiner	Date Considered

*Examiner: Initial if reference is considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.